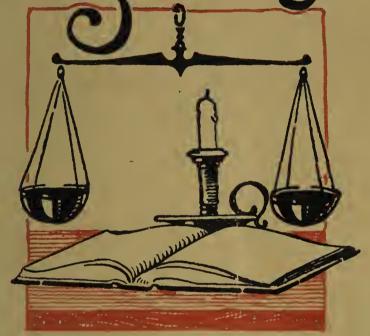
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Retail-Price

The Day toEigure-Profits



by Thomas A. Fernley.

The National Hardware
Association of the
United States
505 Arch Street
PHILADELPHIA

The following table shows the percentage of cost which must be added to effect a given percentage of profit on the sale:

Add % to Cost	To Make % Profit on Sales	Add % to Cost	To Make % Profit on Sales
1	00	26	20.62
	.99	26	20.63
2	1.96	27	21.26
3	2.91	28	21.88
4	3.85	29	22.48
5	4.76	30	23.08
6	5.66	31	23.66
7	6.54	32	24.24
8	7.41	33	24.81
9	8.27	33 ½	25.00
10	9.09	34	25.37
11	9.91	35	25.93
12	10.71	36	26.47
12½	11.11	37	27.01
13	11.50	37 ½	27.27
14	12.28	38	27.54
15	13.04	39	28.06
16	13.79	40	28.57
16%	14.29	41	29.08
17	14.53	42	29.58
18	15.25	43	30.07
19	15.97	44	30.56
20	16.67	45	31.03
21	17.36	46	31.51
22	18.03	47	31.97
23	18.70	48	32.43
24	19.35	49	32.88
25	20.00	50	331/3

The percentage of profit should always be figured on the selling price and not on the cost.

THIS BOOKLET was originally prepared for private distribution, but has been reprinted at the request of a number of business houses who desired to supply their customers, salesmen and house employees with a copy.

¶ A careful reading is recommended in the belief that increased profits will accrue to those who adopt in practice the principle expounded.

¶ Members can obtain additional copies from the Association's Office.

HE DOES NOT MAKE ONE CENT KNOWLEDGE ARE WASTED. DOMESTIC REGINERRING LUNHOU AND HIS TIME AND YOU'RE RIGHT Ah! He Don't Make Nuthin! HIS OVERHEAD EXPENSES ARE 20% OF THE SELLING PRICE 350 HE BILLS THE CUSTOMER HE MAKE HOW MUCH DOES SEARCH ME A PLUMBER SELLS CINCH TO AND TWO CINCH TO AND TWO PIECES OF PIPE, BUT DUNNO PROBLEM COMES OUT DIFFERENT KNOW HOW TO EVERY TIME M D 9

Domestic Engineering's Cartoon "Pens Asinorum"

The Right Way to Figure Profits

By

Thomas A. Fernley



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THE RIGHT WAY TO FIGURE PROFITS

on such an important subject as the method of calculating the percentage of profits there should be such a variance of opinion as seems to exist, for the issue involved is vital to the welfare of every one engaged in any form of commercial activity.

True, the vital issue is the showing of net profit in dollars

Correct Method Should be Sought and cents at the end of the year when the inventory is completed

and books are closed, but in order that this showing should be satisfactory, the proper method of figuring profits should be pursued during the year. In our mind there should be no misunderstanding as to the correct method of calculating this most essential element in every business transaction, for accuracy is the twin brother of honesty and

right methods are necessary for the attainment of any desirable thing.

Every man engaged in business ought to be able to see that

John does not have 50% more than James, because James has 50% less than John.

Yet many business men seem to have persistently refused to acknowledge that any per cent. of a smaller sum is a smaller per cent. of a larger sum—that if a fixed sum is a certain per cent. of a certain sum, it is a smaller per cent. of a larger sum—or to put it concretely, that if 25 is 25% of 100 it is only 20% of 125 and 25% increase over cost is 20% profit on the selling price.

An incorrect or incomplete understanding of percentage of profits and failure to observe the proper method of figuring the percentage of profit is the rock on which many commercial undertakings have gone to pieces. The subject of percentage of profit has not been given sufficient consideration by the school and college text book writers, especially from the standpoint of business men, so that the insufficient and incorrect understanding of the question has led many to falsely believe that the percentage of profit should be figured on the cost.

The method of figuring the ratio of profit on the sale is declared by many who may not be fully informed to be diametrically contrary to the methods taught in our schools, and is therefore loudly decried by those who now insist on using the net cost as a base, to their consequent loss.

So that it may not be misunderstood, it should be said that it is *scientifically* correct to use either the cost or the selling price as a base in figuring the percentage of profit, so long as it is stated on what base the percentage has been calculated. This, however, should not be regarded as being in the nature

Strictly
a Business
Question

of an academic discussion, for it is certainly the privilege of pro-

fessional men to hold any views that they may prefer on this subject; but it is hoped that they will concede to business men the same privilege, especially when the method followed has such a decided effect on the volume of Net Profit realized from the conduct of their business, and permit them to adopt that method which most fully answers their requirements. The idea is to prevent men from figuring the cost of doing business on the gross sales and their percentage of profit on the cost of merchandise-without appreciating the fact that it makes a difference.

School and college text books refer to this question as "Percentage of Gain and Loss," and the initial figure or cost is used as the base.

Some text books use as the base a prime or net cost and again others add a certain amount for expenses using the gross cost as the base. So far as the question under discussion is concerned the percentage of profit should be figured on the selling price, just the same, whether prime cost or cost plus selling expense is used.

Many of the examples given refer to abstract figures, citing such cases as the following:

"If the population of a town increases from 30,000 to 45,000, what is the percentage of gain? Answer—50%."

This is, of course, correct, and Percentage of the words "gain" Increase in a n d "increase" Abstract Figures are properly used Not the Question in this connection, but this bears no relation to the question of percentage of profit as applied to commercial transactions involving money.

With the cost as a base or 100 the text books figure that if 25% is added the percentage of profit is twenty-five one hundredths $(^{25}/_{100})$ or $^{1}/_{4}$, which is equal to 25%. In this case we would consider the cost as 100 and the added 25% would make a total of 125.

The selling price should be considered as 100 per cent. (100%) and percentage of profit would be $\frac{25}{125}$ or $\frac{1}{5}$ which would be 20% profit on the sale.

A percentage of gain or increase of many hundred per cent. is possible, but as percentage of profit is on sale, 100 per cent. profit is impossible unless the goods are secured free of charge.

The percentage of profit and the percentage of cost of doing business should both be figured on the same base.

First, let us consider what we

use as our cost. Almost all merchants consider as cost the invoice price or "prime" cost, with Most Merchants no selling or Base Figures on other expenses Delivered Cost added, merely figuring in the cost of delivery to their warehouse.

All operating expenses, storage, selling, office expenses and every other item of expense and profit must be provided for in the difference between this net cost and the net selling price.

On the other hand, manufacturers very generally start with

Manufacturers'
Cost Includes
Selling Expenses

their shop or mill cost and add to this all the direct outlays incident

to placing the goods in the hands of the buyer. This includes storage, selling expenses, office expenses, packing, freight and all miscellaneous expenses, making a gross cost above which everything is profit.

This fact accounts in a measure for the variance of opinion between some manufacturers

and merchants on this question. Manufacturers are prone to tell merchants that on their line of goods a profit of 25% is made, when the fact is that the gross

Don't be misled profit is 20% on the sale. If arguments of this na-

ture are properly met, a change of method beneficial to the entire business community will be effected.

The fact is, however, that no matter whether the prime or gross cost is used the percentage of profit should be calculated on the selling price.

Business men generally are coming to a knowledge of the

Universal Adoption of Correct Method Desirable fact that universal convention in an approved method of figuring the percent-

age of profit adapted to business conditions, will accrue to the general benefit of all.

Some of the more important reasons for pursuing this method of figuring the Percent-

age of Profit on the sale are agfollows:

In every business (we refer more particularly to merchandizing) two separate amounts

Returns Needed on Two Items of Capital of capital are required. One item of capital is required for invest-

ment in merchandise. Another item of capital is necessary for operating expenses, selling expenses and all other expenditures not properly chargeable to merchandise account.

All the capital invested in the business must produce a proper return. Dividends are obviously impossible on the entire amount of capital invested unloss all is considered in making selling prices.

If the percentage of profit is reckoned on the cost of merchandise only, no provision is made for the other necessary item of capital demanding returns.

The sales totals are always readily ascertained, but the total of each individual, daily and

monthly cost of goods sold is seldom, if ever, recorded in the books of business houses.

Therefore, with the sales to tals always present and the fact conceded that the purpose of the business is primarily selling, is not the sale a proper base for all calculations, and how could cost be considered when it is not definitely known by reference to sales books?

Gross costs can only be ascertained from the totals obtained at the end of the business year, and are not shown daily as are the gross sales.

The amount of profits depends largely on the volume of business, so that the percentage of profits to sales is clearly indicative of the character of the year's work.

The percentage of profits on cost would not indicate so accurately the result of the year's business.

The percentage of expense of

conducting a business may be readily ascertained by dividing the gross expenses by the gross sales. As this percentage of expense is on the sales, it thought best to refer to the percentage of profit on the sale to

Percentage of Expense is Found on Sales

derstanding consequent loss through the use of any other method. For instance, if you figure your percentage of profit on the cost and your overhead expenses on the sale—you may add 25% to the cost—with an overhead expense

avoid any misun-

expect to make money. Do you? The fact that a profit is not made until a sale is actually effected further ad-No Profit Till vances the selling Goods are Sold price as the proper basing factor for percentage of profit.

of 20% on the selling price and

The salary or other form of remuneration of salesmen is always reckoned on the sale and

The Right Way to Figure Profits

the amount is always based more or less on a percentage of the sales totals.

Remuneration of Salesmen

Mercantile or other taxes of a similar nature are assessed on a certain percentage of the annual sales.

Also if any special taxes are levied by the state on the sales of any special goods, such as revolvers, drugs, etc. the amount is always a certain percentage of the selling price of such items and not a percentage of the cost.

All allowances in percentage to customers for any reason, or no reason at all, are based on the selling price.

There is the 10% allowance by Department Stores to the clergy, dressmakers, teachers, etc.—all deduct the 10% from the selling

Certainly the astute managers of department stores do (16)

price, and they neither know of

nor care about the cost.

not add 10% and then allow 10% thereby losing 1%.

The use of terms of percentage in the advertisements of retailers has educated the consumer to figure percentage.

No merchant enjoying a reputation for honesty would think

In Advertising We Speak of 10% off of making such an alluring promise as to give a dollar's worth of

goods for fifty cents or even the whole dollar's worth for nothing.

This probably seems ridiculous, yet such expressions as "LET US SAVE YOU 50% TO 100% ON YOUR CLOTHING BILLS," are used by some business houses.

None can fail to realize what a saving of 100% means. It means that they are going to give away the goods or merchandise offered.

The consumer only has before him the selling price, and although the merchant may be making 200% INCREASE over cost on his goods, he can never,

never make any money selling to the consumer at a saving of 100% even if he got the goods for nothing—in which case he would only come out square and at a loss of his operating expense.

Again, through this illustration, we see the advisability and wisdom of figuring, talking and thinking of the percentage of profit as based on the selling price—not on the cost.

The men who figure profit on the cost price aim to prove the The Other Way—

The Other Way—

The Other Way—

The Other Way—

Saying on Saying:—

"Start out with a dollar in your pocket, and buy two bushels of potatoes at 50 cents a bushel. Sell them at 75 cents a bushel. You now have \$1.50. You have gained 50 cents. Now 50 cents is 50% of \$1.00, and the profit is 50%."

We are dealing with the man who keeps books; who knows what his sales totals are; who has an expense account; whose This Method is salesmen look for One for a compensation Merchants equal to some fixed percentage of their total sales.

If our potato-selling friend in the illustration had incurred extravagant overhead charges auto delivery, etc., to sell his potatoes and his selling cost would have been 40% on the sales—his profits would have been losses.

Some have an impression doubtless based on an inaccu-

Only the True, Correct Method Being Sought rate and incomplete information, that this method of figur-

ing the percentage of profit on the selling price is for the purpose of fooling one's self into the belief that one is making less money than is really the case. This is not so. Business men should figure the percentage of profit on the selling price in order to arrive at the exact truth and to avoid fooling themselves into believing that they are making money when they are losing. Of course, net profit in a sufficient volume of dollars and cents is the ultimate goal, but again the fact may be repeated that correct methods are necessary to the attainment of any desirable thing.

As an illustration of the greater safety of figuring on

Result of
Figuring
Percentage of
Profit on Cost

sales, especially with untrained minds which do not properly discriminate, a case

may be cited where the General Manager of a business sold an article which cost \$.80 for \$1.00 and basing his percentage of profit on the cost figured that he was making 25%. At the end of a given period the sales totaled \$20,000. The manager told a stockholder the amount of sales and also the percentage of profit.

The presumption was that a profit of \$5000.00 had been realized, while the books only showed a profit of \$4000.00 or 20% on the sales.

This General Manager was doubtless like many other men in the fact that it is necessary for them to explain many, many details. Then, why add one more item to this list of things to be explained, when useless, timewasting expositions could be spared Manager and stockholder by figuring on the selling price.

Cases have come to our notice where arrests for defaulting have actually been made in such instances, and the wisdom of figuring the percentage of profit on the sale has been taught the prosecutor and defendant at considerable expense.

As a specific instance of a case where the matter of the method

Percentage in the Criminal Courts of figuring the percentage of profit was reviewed in court, it is on record that some years since, a Philadelphia cloth merchant had his Manager (who was also his bookkeeper) arrested for embezzlement.

The facts were that the pro-

prietor had a certain line of imported goods on which he had a fixed percentage of profit—say 25%. He figured his profit on the cost—not on the selling price.

The proprietor went to Europe. When he came back he looked over the books and found that the sales during his absence amounted to \$125,000; he thought of the 25% profit he had been making and thought he should have \$31,250 gross profits.

On referring to other records he found that he had but \$25,000

Ignorance Leads to Arrest of an Innocent Man gross profits; he figured he was short \$6250.00 in his gross profits.

He had the manager arrested for embezzlement. The manager was thrown in the county prison; an expert accountant was sent for, and two days' work on the books failed to reveal any irregularities. The expert accountant closely questioned the merchant as to how he came to charge the manager with embezzlement.

(22)

'This conversation revealed the startling fact that it was on the matter of an incorrect conception of net profits due to a false method of figuring the percentage of profit that the charge of embezzlement was laid.

Two hours' attempted explanation, by the expert accountant, of the matter of the methods of calculating the percentage of profit and an attempt to show that any per cent. of a smaller sum is a smaller per cent. of a larger sum, or that 25% of 100 was 20% of 125, failed to show the merchant where he had made his disastrous mistake.

The accountant then sent for a box of matches. He counted

Hard to Drive a
Point Through a
Thick Skull

out one hundred matches. He then added 25 matches for the 25% profit

that the merchant talked about. Then said he, "We will suppose that these 125 matches equal the amount of your sales, \$125,-000.00 as you saw when you

came home from abroad. You believed you were making 25% profit. You did not think whether this percentage was on the cost or on the selling price.

"You possibly thought, in common with a great many other merchants, who have given the matter no consideration, that it made no difference—but, Sir, you went to your sales account, or to these 125 matches, you took therefrom 25% of the amount of your sales, \$125,000, and, in so doing, you went into your cost 6½ matches, or \$6250.

"In other words, you calculated you had 25%—31¼— (\$31,250.00) on the 125 matches or \$125,000, whereas you had made a gain of this 25% not on \$125,000 but on \$100,000—you had only made 20% on the \$125,000 or \$25,000, so the best thing you can do is to get this manager out of jail

A Costly Lesson ager out of jail and make amends to him as best

you can."

The merchant saw his mistake (24)

and forthwith secured the release of the bookkeeper from prison, but incidentally paid \$2,500 damages for false arrest and imprisonment.

In a recent series of articles, "The New Gospel of Efficiency," Mr. E. St. Elmo Lewis, advertising manager of Burroughs Adding Machine Co., Detroit, said:

"A retailer was buying shirts at \$1.00 a piece. I asked him how much it cost him to do business. He said he thought 25% would cover it. I

asked him what he thought he would make on it; he said he marked it up for 20% profit and his price was \$1.45. His price should have been \$1.81 to make a 20% profit."

This statement from a prominent official of a company making wonderful calculating machines, and whose daily work has to do with the various methods of correct and rapid figuring, would surely not be based on any method except the right one.

Furthermore, the method of (25)

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figuring the percentage of profit on the selling price is followed

Business Houses by thousands of Figure on Selling Price and insisted upon by thousands of manufactur-

ing and mercantile houses throughout the country, who only advocate methods which are absolutely correct and in accord with sound busi-

ness practices.

From an article printed some time ago we quote as follows:

"You will find in every arithmetic such examples as:

A man buys a

horse for \$50 and sells him for \$75, what percentage of profit does he make? Answer, 50%." No more fatal and misleading ones were ever penned. They lead us to think of the percentage of profit from an unbusiness-like stand-point, and cause many business men to think they are making much larger profits than they really are. This makes them prodigal of expense and often leads to a failure, which

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with a more thorough knowledge of percentage could have been avoided.

Suppose a man to have in contemplation the sale of a horse on the basis of the above transaction. A broker approaches him and offers to conduct the negotiation. He asks a commission of 33 1-3%.

Now, the owner of the horse, having a profit of 50% in sight,

Example of agrees to this, and the broker, having complet-

ed the transaction, renders a bill as follows:

Sold	one	horse	at .	•	•	•	•	•	•		\$75
Com	miss	ion, 33	1-3%	C	•	•	•	•	•	•	25

Due seller\$50
The seller's books would show
a profit of 50% entirely eaten
up by a commission of 33 1-3%.
Not good figuring, is it? Still
that is the way nine-tenths of
our smaller merchants figure,
which fact often accounts for
their being small.

Always figure your profit on (27)

the sale. Then you will be on the safe side. To obtain the correct percentage of profit on any transaction subtract the cost from the selling price, add two ciphers to the difference, and divide by the selling price.

EXAMPLE NO. 1

An article costs \$5 and sells for \$6. What is the percentage of profit? Answer, 16 2-3%.

Process—Six dollars minus \$5 leaves \$1, the profit. One dol-

lar divided by \$6,

Process of decimally, gives

the correct answer, 16 2-3%.

This operation is simple and a knowledge of it being vital to any one engaged in, or intending at any time to engage in business, it should be carefully committed to memory and constantly borne in mind.

EXAMPLE NO. 2

An article costs \$3.75. What must it sell for to show a profit

Analysis of Figures of 25%? Answer, \$5.

Process — Deduct 25 from 100. This will give you a remainder of 75, the percentage of the cost. If \$3.75 is 75%, 1% would be \$3.75 divided by 75 or 5 cents, and 100% would be \$5. Now, if you marked your goods as too many do, by adding 25% to the cost, you would obtain a selling price of about \$4.69, or 31 cents less than by the former method. Which is right?

When you take 25% off the selling price, figured according to the first rule, you will still have your cost intact. Take 25% from the second sum and see if the cost remains.

A large department store changed hands. The goods in stock, to cover freight and other charges were marked up 10%. They were to be sold at actual cost, but for convenience sake were invoiced as marked. The inventory having been completed, nothing re-

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mained to be done but take off the 10% that had been added.

The parties to the sale accordingly approached the accountant having the matter in charge with a request that this be done. The man of figures set about making an elaborate calculation with this object in view, when he was questioned by the seller as to what he was doing.

"Reducing the goods to cost," he answered.

"Nonsense! Just take off 10%," said the seller.

"Do you want it done that way?" asked the accountant.

"Why not?" said the merchant.

"Well, just add 10% to a dollar and from the amount thus obtained deduct 10% and see if you have your original dollar left."

The merchant saw the point at once and said no more to the man of figures, who was saving him more than \$3,000 which he would have lost on account of a lack of knowledge of percentage.

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Eight Reasons why the Percentage of Profit should be Figured on the Selling Price and not on the Cost.



FIRST — Because the remuneration of salesmen is figured on a certain percentage of the SELLING PRICE.

SECOND—Because the percentage of expense of conducting business is based on the SELLING PRICE. If you talk per

cent of profit on cost and per cent. of expense on the selling price, where are you?

THIRD—Because the mercantile and other taxes are invariably based on a percentage of the GROSS SALES.

FOURTH—Because the SALES Totals are always given in books of record—Cost Totals are seldom, if ever, shown.

FIFTH—Because a profit must be provided for two items of capital—one the capital invested in merchandise—the other the capital necessary for operating expenses and other expenditures not properly chargeable to merchandise account. This is only possible by figuring profit on the SELLING PRICE.

SIXTH—Because it indicates correctly the amount of gross or net profit when amount of SALES is stated.

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The percentage of profits on sales is indicative of character of result of years' business—percentage of profit on cost is not.

SEVENTH—Because allowances in percentage to customers are always from the SELLING PRICE.

EIGHTH—Because no profit is made until SALE is actually effected.

The following Table shows the percentage which must be added to cost to effect a given percentage of profit on the Selling Price:

VII CITE	beining I I'd		
Add to Cost	To Make on Selling Price	Add to Cost	To Make on Selling Price
5%	43/4%	31.58	24
71/2	7	33 1-3	25
10	9	35	26
11.11	10	371/2	271/4
12.36	11	40	281/2
121/2	111/8	42.86	30
13.63	12	45	31
14.94	13 .	47	32
16.28	14	50	33 1-3
16 2-3	141/4	53.85	35
17.65	15	55	351/2
19.05	16	60	371/2
20.00	16 2-3	65	391/2
20.49	17	66 2-3	40
21.96	18	70	41
23.46	19	75	423/4
25	20	80	441/2
26.58	21	85	46
28.21	22	90	471/2
29.88	23	100	50
-	(3	2)	

TABLE FOR FIGURING NET PROFITS

If your cost of doing business figured on sales is represented by one of these figures

25%	5 Less	8	34	∞ ⊢i ∞	12½	176	25
24%	4 Loss	1	44	9	13 ₂	18	26
23%	3 Los	2	54	101/3	143	19∮	27
22 %	1 Loss 2 Loss	က	€9	113	15½	20 🖗	28
21%	1 Loss	4	42	12 ¹ / ₃	$16\frac{1}{2}$	216	29
20%	90	S	8	133	17 ¹ / ₂	22.5	30
19%	-	9	94	141	18 <u>1</u>	23 6	31
18%	2	7	104	15 <u>1</u>	$19\frac{1}{2}$	24 6	32
17%	က	∞	114	163	$20\frac{1}{2}$	25 6	33
16%	4	6	124	171	$21\frac{1}{2}$	26 5	34
15%	ហ	10	134	18 ¹ / ₃	$22\frac{1}{2}$	27 %	35
14%	9	11	14	19 ₃	$23\frac{1}{2}$	28 6	36
13%	7	12	15‡	$20\frac{1}{3}$	24 ¹ / ₂	29 §	37
12%	∞	13	164	213	$25\frac{1}{2}$	308	38
10% 11% 12% 13%	6	14	174	$22\frac{1}{3}$	26 <u>1</u>	316	39
10%	10	15	184	23 ¹ / ₃	27 ½	$32\frac{6}{7}$	40
%	25	331	40	20	09	75	100
And you mark your goods at one of these percentages above delivered cost.							

Your percentage of net profit is represented by the figure at the junction of the two columns

Explanation—If your cost of doing business is 15 per cent of your gross sales and you mark a line at 25 per cent above cost, your net profit is 5 per cent on sales "as shown in the diagram. If your cost of doing business is 18 per cent and you mark a line at 60 per cent above cost, your net profit is 191-2 per cent on sales. COURTESY OF BUTLER BROS.



